Remarks

Further and favorable reconsideration is respectfully requested in view of the foregoing amendments and following remarks.

Initially, the Board of Patent Appeals and Interferences has been advised of the filing of the instant RCE. Applicants acknowledge that the filing of the RCE will be treated as a withdrawal of the appeal.

Claim 1 has been amended to recite that the aluminium alloy sheet material is based on an AA3xxx, based on the disclosure toward the top of page 7 of the specification, where pitting corrosion is discussed in relation to coarse Fe-bearing particles. Applicants further note that an example of this alloy is the AA3003 alloy, which is referred to on pages 5-7 of the specification.

Amended claim 1 also recites that the continuous strip casting of the sheet is at a predetermined solidification rate in a range from 10^2 to 10^3 °C/sec, which is recited in claim 21. As a result of this amendment, claim 21 has been cancelled.

Finally, amended claim 1 recites that the material microstructure exhibits primary Fe-bearing particles of the type $Al_6(Fe,Mn)$ and α-AlMnFeSi (see page 7, lines 7-9 of the specification) having an average size below 1 micrometer^2.

Applicants take the position that, especially in view of these amendments to claim 1, which is the only independent claim under consideration, the prior art rejections against the claims should be withdrawn.

Referring to the "Response to Argument" section the Examiner's Answer of October 21, 2009, Applicants maintain that the Examiner has still not disputed the fact that the feature of claim 1 relating to the "material microstructure exhibiting primary particles having average size below 1 micrometer^2" is novel, as neither of the two U.S. references, US 6,238,497 (US '497) nor US 6,261,706 (Fukuda et al.) define a method of producing aluminium alloy sheet material with such microstructure. This is now even more the case in view of the amendment to claim 1 reciting that these particles are Fe-bearing particles of the type $Al_6(Fe,Mn)$ and α-AlMnFeSi.

The Examiner states on page 10 of the Examiner's Answer, regarding US '497, that Applicants have not argued that the reference is so different or disparate as to teach away from the claimed method. However, Applicants did argue that the US '497 reference is concerned with a totally different problem/solution than the present invention, namely that if the average cooling rate is less than 10° C/sec, the intermediate particles formed during casting **will be too large and**

cause rolling problems. The US '497 reference does not at all disclose or suggest that there would be a problem with increased pitting corrosion if the size of the Fe-bearing particles of the cathodic area are increased in the alloy. Since US '497 is concerned with coarse particles causing rolling problems, it teaches away from the present invention dealing with small Fe-bearing particles prohibiting corrosion. Further, with a low cooling temperature of 10° C/sec as suggested in US '497, it will not be possible to obtain particles with a size as defined in the present claims. This is another indication that US '497 teaches away from the present invention.

As stated in the present application and now claim 1, the cooling rate should be in a range from 10^2 to 10^3 °C/sec ensuring material microstructure exhibiting primary Fe-bearing particles of the type $Al_6(Fe,Mn)$ and α-AlMnFeSi having average size below 1 micrometer[2].

As for the Fukuda et al. reference, as formerly stated, it relates to an aluminum alloy clad material to be used as tube material or header material for heat exchangers that exhibits superior strength after brazing and excellent corrosion resistance and where a sacrificial anode material may be clad onto an aluminum strip possessing a **prescribed number of large Si and Fe inter-metallic particles which are present to preferentially corrode** and thereby protect the inner layer through galvanic protection. These large particles are obtained by an aluminum alloy containing large amounts of Zn (1.5 - 8 wt%) and Cu (0.3 - 1. 1 wt%). The alloy according to the present invention contains just fractions of such amounts.

Besides, Fukuda et al. do not at all mention the importance of temperature control to control particle size as is the case with the present invention.

For these reasons, combined with their patentability arguments of record, Applicants respectfully submit that the presently claimed invention is clearly patentable over the applied references.

Therefore, in view of the foregoing amendments and remarks, it is submitted that each of the grounds of rejection set forth by the Examiner has been overcome, and that the application is in condition for allowance. Such allowance is solicited.

Respectfully submitted,

Morten SYSLAK et al.

By 

Michael R. Davis
Registration No. 25,134
Attorney for Applicants

MRD/pth
Washington, D.C. 20005-1503
Telephone (202) 721-8200
Facsimile (202) 721-8250
April 14, 2010